

In the Claims

1 – 19 (cancelled)

20. (previously presented) A projection system, comprising:

a light source having a reflecting surface;

a retardation generating a phase difference of a quarter period between light before and after passing through the retardation;

a polarizer allowing light of a first polarity to pass through while reflecting light of a second polarity;

a polarizing beam splitter directing light from the polarizer toward a panel producing an image to be projected;

wherein the light source emits a light beam passing through the retardation to the polarizer so that light of the first polarity in the light beam passes through the polarizer to the polarizing beam splitter while that of the second polarity is reflected by the polarizer through the retardation to the reflecting surface and further reflected by the reflecting surface through the retardation to the polarizer.

21. (previously presented) The projection system as claimed in Claim 20, wherein the polarizer has an illuminated surface in front of the light source, and the retardation adheres to the illuminated surface.

22. (previously presented) The projection system as claimed in Claim 20, further comprising a transparent glass plate that adheres to the retardation.

23. (previously presented) The projection system as claimed in Claim 20, further comprising a lens array disposed between the light source and the retardation and being substantially perpendicular to the light axis, thereby preliminarily unifying the light beams from the light source.

24. (previously presented) The projection system as claimed in Claim 20, wherein the retardation has a slow axis, the polarizer has an absorptive axis, of which the slow axis and the absorptive axis define an included angle of substantially 45 degrees.

25. (previously presented) The projection system as claimed in Claim 20, wherein the light source further comprises a lamp and a parabolic lampshade, and the parabolic lampshade has the reflecting surface, of which the lamp is disposed at the focus of the parabolic surface of the lampshade for providing a plurality of parallel light beams.

26. (previously presented) The projection system as claimed in Claim 20, further comprising a condenser and a relay, the condenser being used for unifying a shape of the light beam, and the relay being used for concentrating and collimating the light beam.

27. (previously presented) The projection system as claimed in Claim 20, further comprising at least one liquid crystal panel and a lens, wherein the polarizing beam splitter receives the light of a first polarity from the polarizer and the liquid crystal panel is adapted for producing the image and projecting the image through the lens.

28. (previously presented) The projection system as claimed in Claim 27, further comprising a color selector, and the amount of the liquid crystal panels is two, of which the color selector is adapted for selecting the desired color and its complementary color, and the two liquid crystal panels are adapted for producing the image and projecting the image through the lens.

29. (new) The projection system as claims in Claimed 20, wherein the polarizer has multiple parallel strips supported by a substrate.

30. (new) A projection system, comprising:

a light source having a reflecting surface;

a retardation generating a phase difference of a quarter period between light before and after passing through the retardation;

a wire grid polarizer allowing light of a first polarity to pass through while reflecting light of a second polarity, the polarizer having multiple parallel strips supported by a substrate; and

a polarizing beam splitter directing light from the polarizer toward a panel producing an image to be projected,

wherein the light source emits a light beam passing through the retardation to the wire grid polarizer so that light of the first polarity in the light beam passes through the wire grid polarizer to the polarizing beam splitter while that of the second polarity is reflected by the wire grid polarizer through the retardation to the reflecting surface and further reflected by the reflecting surface through the retardation to the wire grid polarizer.

31. (new) The projection system as claimed in Claim 30, wherein the polarizer has an illuminated surface in front of the light source, and the retardation adheres to the illuminated surface.

32. (new) The projection system as claimed in Claim 30, further comprising a transparent glass plate that adheres to the retardation.

33. (new) The projection system as claimed in Claim 30, further comprising a lens array disposed between the light source and the retardation and being substantially perpendicular to the light axis, thereby preliminarily unifying the light beams from the light source.

34. (new) The projection system as claimed in Claim 30, wherein the retardation has a slow axis, the polarizer has an absorptive axis, of which the slow axis and the absorptive axis define an included angle of substantially 45 degrees.

35. (new) The projection system as claimed in Claim 30, wherein the light source further comprises a lamp and a parabolic lampshade, and the parabolic lampshade has the reflecting surface, of which the lamp is disposed at the focus of the parabolic surface of the lampshade for providing a plurality of parallel light beams.

36. (new) The projection system as claimed in Claim 30, further comprising a condenser and a relay, the condenser is used for unifying a shape of the light beam, and the relay is used for concentrating and collimating the light beam.

37. (new) The projection system as claimed in Claim 30, further comprising at least one liquid crystal panel and a lens, wherein the polarizing beam splitter receives the light of a first polarity from the polarizer and the liquid crystal panel is adapted for producing the image and projecting the image through the lens.

38. (new) The projection system as claimed in Claim 37, further comprising a color selector, and the amount of the liquid crystal panels is two, of which the color selector is adapted for selecting the desired color and its complementary color, and the two liquid crystal panels are adapted for producing the image and projecting the image through the lens.